



GNSS Receiver
RSAT-3
Multifunctional Intelligent RTK



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Multifunctional Intelligent RTK

Main body magnesium alloy
ABS/PC top cover

1408 Channel

GPS GLONASS BDS GALILEO
QZSS SBAS

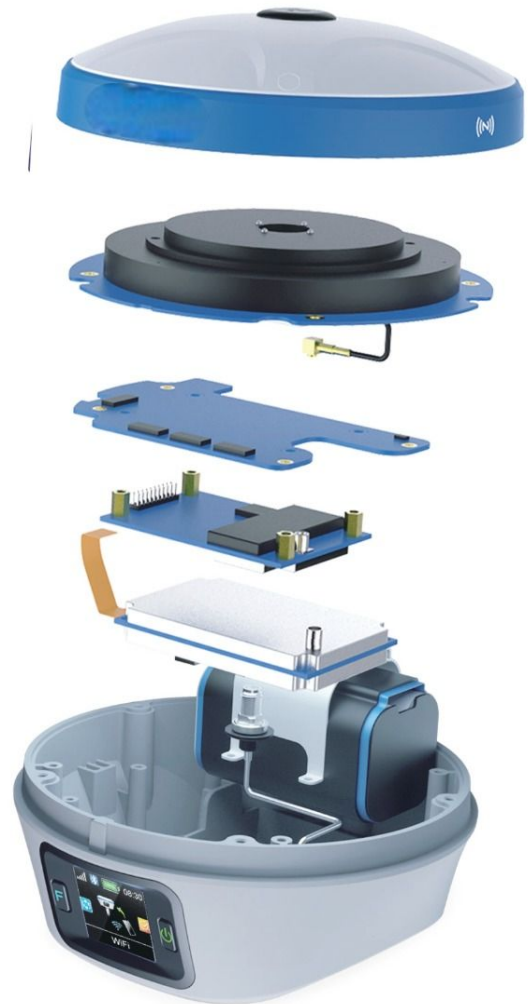
Adjustable power
of 1W/2W/5W

7.4V, 6500mAh

More than 18 Hours
(Typical, Rover, GSM)

Comprehensive network coverage
Compatible with global network

The 5th generation
IMU technology



HEIGHT	DIAMETER	WEIGHT
90.7 mm	143.5 mm	900 g

5W Radio, transmission distance up to 12-25km
LCD display

(a complete range of Civil Surveying Products...)

ASI
ROBUST®
Surveying Instruments

RSAT-3 GNSS Receiver

RSAT-3 is a high-performance GNSS receiver that provides an easy-to-use solution for users. ROBUST RSAT-3 supports the original tilt compensating GNSS solution. Multi constellation and frequency tracking always guarantee a fixed solution for your job. LCD display screen can make your operation faster and easier. RSAT-3 built-in 5W radio allows users to have a longer working distance, up to 12-25km in open areas, The durable IP68 design makes it possible to work in extreme environments.

CHARACTERISTIC

Linux Intelligent System

ARM Cortex-A7 + Linux, the intelligent system platform, brings efficient computing and unlimited expansion of product functions to users.

Multi Constellation

With its 1408 channels, RSAT-3 provides an excellent on board real time navigation solution with high accuracy. All GNSS signals (GPS, GLONASS, BDS, GALILEO, QZSS and SBAS) are included.

Adjustable Power

RSAT-3 has internal radio of adjustable power of 1W/2W/5W, and works as base station at 5W power. The transmission distance can reach to maximum 12-25km when working in the open area.

Combined Antenna

The new four in one antenna integrates GNSS, WIFI, Bluetooth and 4G, with smaller volume and better signal.

4G Modem

RSAT-3 has an internal 4G Modem that operates with more cellular network signals. A fast internet connection is guaranteed.

Long Endurance

Built in high-capacity lithium battery ensures continuous working time of more than 18 hours under normal operation.

SPECIFICATION

SYSTEM

HARDWARE SYSTEM ARM Cortex-A7 1.8GHz

OS Linux

GNSS

GPS L1 C/A, L1C, L2P(Y), L2C, L5

GLONASS L1, L2, L3

BDS B1I, B2I, B3I, B1C, B2a, B2b(PPP)

GALILEO E1, E5a, E5b, E6(PPP)

QZSS L1, L2, L5

SBAS L1(PPP)

NavIC (IRNSS) L5 (ACTIVATED)

Channel 1408

Standard Output NMEA-0183

Correction I/O Protocol RTCM 3.X

Frequency 20Hz(max)

Reacquisition Time <1s

Cold Start Time <40s

ACCURACY

SINGLE (RMS) Horizontal: 1.5m / Vertical: 2.5m

DGPS (RMS) Horizontal: 0.4m / Vertical: 0.8m

RTK (RMS) Horizontal: $\pm (8\text{mm}+1\text{ppm})$
Vertical: $\pm (15\text{mm}+1\text{ppm})$

Timing Precision (RMS) 20ns

Static Mode Precision (RMS) Horizontal: $\pm (2.5\text{mm}+0.5\text{ppm})$
Vertical: $\pm (5\text{mm}+0.5\text{ppm})$

Velocity Estimation (RMS) 0.03m/s

Tilt Correction (Within 60°) <2cm

SYSTEM PLATFORM

Bluetooth BR+EDR+BLE

WIFI 802.11 b/g/n

Network LTE FDD: B1/2/3/4/5/7/8/12/13/
18/19/20/25/26/28
LTE TDD: B38/39/40/41
WCDMA: B1/2/4/5/6/8/19
GSM: B2/3/5/8

Radio Frequency: 410~470MHz
Protocols: TRIMTALK, TRIMMK3,
SOUTH, TRANSEOT

Radio RF transmit power: 1W/2W/5W
Air Baud Rate: 9600, 19200bps

Storage 32GB storage

DISPLAY

LCD Screen size: 1.3inch
Display mode: TFT
Display format: 240*RGB*240
View Angle: FULL

BATTERY

Battery 7.4V, 6500mAh

Work time More than 18 hours (Typical,
Rover, GSM)
The static working mode
supports continuous data
collection for 26 hours

Charge USB PD 15V/2A
5V/3A
(Support fast charging adapter
and adaptively and dynamically
adjust charging current)

ENVIRONMENT

Work Temperature -20°C~+60°C

Storage Temperature -40°C~+85°C

Shock Withstand a 1.5m pole drop

Protection IP68

PHYSICAL

Materials Magnesium alloy casing with
ABS/PC plastic top cover

Dimensions $\Phi 143.5 \times 90.7\text{mm}$

Weight 900g

ACCESSORIES

RSAT-3 1 Unit

USB power adapter 1 PCS

Type-C To Type-C 1 PCS

Radio Antenna 1 PCS

CERTIFICATION

Regulatory Compliance NGS, CE, FCC


 www.robustsurveying.com  mail@asisurveyinginstruments.com

Manufacturers may update parameters at any time, please refer to the latest product information.



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<https://www.asisurveyinginstruments.com>

Advanced Surveying Instrument (India) Pvt. Ltd.
H-10/103, 1st Floor, Netaji Subhash Place
Pitampura, New Delhi - 110034, INDIA

RTK

RSat 3 (ROBUST)

CHARACTERISTIC

- 32GB, user storage space 24GB
- Quick positioning function
- Built-in 5W Radio
- 1408 channels
- Centimeter level
- 4G+WIFI+BT+NFC
- Combined antenna
- LCD display
- Longer endurance
- Linux intelligent system

SIZE (mm)



CONTACT US

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 balinder2kumar@yahoo.com
balinder2kumar@gmail.com



TCB

GRANT OF EQUIPMENT
AUTHORIZATION

TCB

Certification

Issued Under the Authority of the
Federal Communications Commission

By:

Eurofins Electrical and Electronic Testing NA,
Inc
914 W. Patapsco Avenue
Baltimore, MD 21230-3432

Date of Grant: 12/18/2024

Application Dated: 12/18/2024

ADVANCED SURVEYING INSTRUMENTS (INDIA) PVT. LTD.

H-10/103, 1st Floor, Express Arcade

Netaji Subhash Place, Pitampura

New Delhi, 110034

India

Attention: Balinder Kumar , GNSS RECEIVERS

NOT TRANSFERABLE

EQUIPMENT AUTHORIZATION is hereby issued to the named GRANTEE, and is VALID
ONLY for the equipment identified hereon for use under the Commission's Rules and
Regulations listed below.

FCC IDENTIFIER: 2BMJE-RSAT2-RSAT3

Name of Grantee: ADVANCED SURVEYING INSTRUMENTS
(INDIA) PVT. LTD.

Equipment Class: Part 15 Spread Spectrum Transmitter

Notes: High Precision GNSS Receiver

<u>Grant Notes</u>	<u>FCC Rule Parts</u>	<u>Frequency Range (MHZ)</u>	<u>Output Watts</u>	<u>Frequency Tolerance</u>	<u>Emission Designator</u>
CC	15C	2402.0 - 2480.0	0.004716		

Output power listed is conducted. The antenna(s) used for this transmitter must be installed to provide a separation distance of at least 0.8m from all persons and must not be co-located or operated in conjunction with any other antenna or transmitter, except in accordance with FCC multi-transmitter product procedures.

CC: This device is certified pursuant to two different Part 15 rules sections.

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FCC IDENTIFIER: 2BMJE-RSAT2-RSAT3

Name of Grantee: ADVANCED SURVEYING INSTRUMENTS
(INDIA) PVT. LTD.

Equipment Class: Digital Transmission System

Notes: High Precision GNSS Receiver

<u>Grant Notes</u>	<u>FCC Rule Parts</u>	<u>Frequency Range (MHZ)</u>	<u>Output Watts</u>	<u>Frequency Tolerance</u>	<u>Emission Designator</u>
CC	15C	2402.0 - 2480.0	0.001367		
CC	15C	2412.0 - 2462.0	0.038282		

Output Power listed is conducted. This device has 20 MHz and 40 MHz bandwidth modes. The antenna(s) used for this transmitter must be installed to provide a separation distance of at least 0.8m from all persons and must not be co-located or operated in conjunction with any other antenna or transmitter, except in accordance with FCC multi-transmitter product procedures.

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Regulations listed below.

FCC IDENTIFIER: 2BMJE-RSAT2-RSAT3

Name of Grantee: ADVANCED SURVEYING INSTRUMENTS
(INDIA) PVT. LTD.

Equipment Class: PCS Licensed Transmitter

Notes: High Precision GNSS Receiver

Grant NotesFCC Rule PartsFrequency
Range (MHZ)Output
WattsFrequency
ToleranceEmission
Designator

22H	824.2 - 848.8	1.8493	0.1 PM	247KGXW
22H	824.2 - 848.8	0.4797	0.1 PM	245KG7W
24E	1850.2 - 1909.8	1.3335	0.1 PM	249KGXW
24E	1850.2 - 1909.8	0.6012	0.1 PM	249KG7W
24E	1852.4 - 1907.6	0.3524	0.1 PM	4M15F9W
27	1712.4 - 1752.6	0.3819	0.1 PM	4M14F9W
22H	826.4 - 846.6	0.2512	0.1 PM	4M13F9W
24E	1860.0 - 1900.0	0.4198	0.1 PM	17M9G7D
24E	1860.0 - 1900.0	0.2259	0.1 PM	17M9W7D
24E	1850.7 - 1909.3	0.2547	0.1 PM	1M09W7D
27	1720.0 - 1745.0	0.4887	0.1 PM	17M9G7D
27	1720.0 - 1745.0	0.2612	0.1 PM	17M9W7D
27	1710.7 - 1754.3	0.2877	0.1 PM	1M09W7D
22H	829.0 - 844.0	0.2333	0.1 PM	8M93G7D
22H	829.0 - 844.0	0.1703	0.1 PM	8M93W7D
22H	825.5 - 847.5	0.235	0.1 PM	2M70G7D
22H	824.7 - 848.3	0.1936	0.1 PM	1M09W7D
27	2510.0 - 2560.0	0.4864	0.1 PM	17M9G7D
27	2510.0 - 2560.0	0.3177	0.1 PM	17M9W7D
27	2502.5 - 2567.5	0.3192	0.1 PM	4M49W7D
27	704.0 - 711.0	0.3475	0.1 PM	8M93G7D
27	704.0 - 711.0	0.2183	0.1 PM	8M93W7D
27	699.7 - 715.3	0.2472	0.1 PM	1M09W7D
27	782.0 - 782.0	0.4217	0.1 PM	8M91G7D
27	782.0 - 782.0	0.2911	0.1 PM	8M91W7D

27	779.5 - 784.5	0.4395	0.1 PM	4M48G7D
27	779.5 - 784.5	0.309	0.1 PM	4M49W7D
24E	1860.0 - 1905.0	0.3516	0.1 PM	17M9G7D
24E	1860.0 - 1905.0	0.2489	0.1 PM	17M9W7D
24E	1855.0 - 1910.0	0.4111	0.1 PM	8M91G7D
24E	1850.7 - 1914.3	0.2429	0.1 PM	1M09W7D
90	819.0 - 819.0	0.2198	0.1 PM	8M91G7D
90	819.0 - 819.0	0.1738	0.1 PM	8M91W7D
90	814.7 - 823.3	0.2455	0.1 PM	1M09G7D
90	814.7 - 823.3	0.1972	0.1 PM	1M09W7D
22H	831.5 - 841.5	0.2582	0.1 PM	13M5G7D
22H	831.5 - 841.5	0.1828	0.1 PM	13M4W7D
22H	826.5 - 846.5	0.1945	0.1 PM	4M49W7D
27	2580.0 - 2610.0	0.3926	0.1 PM	17M8G7D
27	2580.0 - 2610.0	0.2799	0.1 PM	17M8W7D
27	2575.0 - 2615.0	0.3936	0.1 PM	8M91G7D
27	2506.0 - 2680.0	0.4842	0.1 PM	17M9G7D
27	2506.0 - 2680.0	0.342	0.1 PM	17M9W7D
27	2501.0 - 2685.0	0.4853	0.1 PM	8M91G7D
27	2498.5 - 2687.5	0.3451	0.1 PM	4M50W7D

Output power listed is ERP for frequencies below 1 GHz, and EIRP for frequencies above 1 GHz.
The antenna(s) used for this transmitter must be installed to provide a separation distance of at least 0.8m from all persons and must not be co-located or operated in conjunction with any other antenna or transmitter, except in accordance with FCC multi-transmitter product procedures.

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EQUIPMENT AUTHORIZATION is hereby issued to the named GRANTEE, and is VALID ONLY for the equipment identified hereon for use under the Commission's Rules and Regulations listed below.

FCC IDENTIFIER: 2BMJE-RSAT2-RSAT3**Name of Grantee: ADVANCED SURVEYING INSTRUMENTS
(INDIA) PVT. LTD.****Equipment Class: Licensed Non-Broadcast Station Transmitter****Notes: High Precision GNSS Receiver**

<u>Grant Notes</u>	<u>FCC Rule Parts</u>	<u>Frequency Range (MHZ)</u>	<u>Output Watts</u>	<u>Frequency Tolerance</u>	<u>Emission Designator</u>
EF	90	421.0 - 470.0	4.9	0.974 PM	1M77G1D

Output power listed is conducted output power. The antenna(s) used for this transmitter must be installed to provide a separation distance of at least 0.8m from all persons and must not be co-located or operated in conjunction with any other antenna or transmitter, except in accordance with FCC multi-transmitter product procedures. Users must be provided with instructions and transmitter operating conditions for satisfying RF exposure compliance.

EF: This device may contain functions that are not operational in U.S Territories except as noted in the filing. This grant has extended frequencies as noted in the filing and Section 2.927(b) applies to this authorization.